

Exercise 5.2b

Classifying Elements – Answers

Name: _____

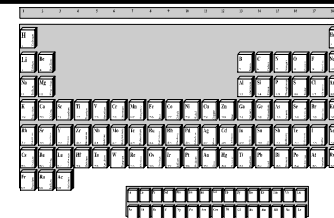
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DIRECTIONS: Fill in the table below using your knowledge of the periodic table.

M = metal, S-M = semi-metal/metalloid, N-M = non-metal

MG = main group, TM = transition metal, IM = inner transition metal

Family – alkali metal, alkaline-earth metal, halogen, noble gas ---- and actinide or lanthanide



Element	e ⁻ Configuration	Period	Group (Roman #)	Block	M / S-M / N-M	MG / TM / IM	Family
Arsenic	[Ar]4s ² 3d ¹⁰ 4p ³	4	V-A	<i>p</i>	S-M	MG	Nitrogen Family
Bromine	[Ar]4s ² 3d ¹⁰ 4p ⁵	4	VII-A	<i>p</i>	N-M	MG	Halogen
Sodium	[Ne]3s ¹	3	I-A	<i>s</i>	M	MG	Alkali Metal
Boron	1s ² 2s ² 2p ¹	2	III-A	<i>p</i>	S-M	MG	Boron Family
Cadmium	[Kr]5s ² 4d ¹⁰	5	II-B	<i>d</i>	M	TM	Zinc Family
Germanium	[Ar]4s ² 3d ¹⁰ 4p ²	4	IV-A	<i>p</i>	S-M	MG	Carbon Family
Silicon	[Ne]3s ² 2p ²	3	IV-A	<i>p</i>	S-M	MG	Carbon Family
Fluorine	1s ² 2s ² 2p ⁵	2	VII-A	<i>p</i>	N-M	MG	Halogen
Argon	[Ar]	3	VIII-A	<i>p</i>	N-M	MG	Noble gas
Carbon	1s ² 2s ² 2p ²	2	IV-A	<i>p</i>	N-M	MG	Carbon Family
Strontium	[Kr]5s ²	5	II-A	<i>s</i>	M	MG	Alkaline-Earth
Magnesium	[Ne]3s ²	3	II-A	<i>s</i>	M	MG	Alkaline-earth
Hydrogen	1s ¹	1	I-A	<i>s</i>	N-M	MG	Hydrogen
Silver	[Kr]5s ¹ 4d ¹⁰	5	I-B	<i>d</i>	M	TM	Copper Family
Tin	[Kr]5s ² 4d ¹⁰ 5p ²	5	IV-A	<i>p</i>	M	MG	Carbon Family
Helium	1s ²	1	VIII-A or II-A	<i>s</i>	N-M	MG	Noble gas
Sulfur	[Ne]3s ² 2p ⁴	3	VI-A	<i>p</i>	N-M	MG	Oxygen Family
Potassium	[Ar]4s ¹	4	I-A	<i>s</i>	M	MG	Alkali metal
Titanium	[Ar]4s ² 3d ²	4	IV-B	<i>d</i>	M	TM	Titanium Family
Uranium	-----	7	-----	<i>f</i>	M	IM	Actinide Series